

REMARKS

In the Advisory Action mailed on October 22, 2008, the Examiner has maintained the rejections of claims 1 through 5, 7 through 10, 12, 13, 15, 16, 18, 19, 21 through 24, 26, 27, 29 through 37, 39, 40 and 42 through 47 under 35 U.S.C. §103(a). In view of the following remarks, the Applicant respectfully requests the Examiner to reconsider the withdrawal of the currently pending rejections.

The Section 103(a) Rejections

The Examiner has rejected claims 1 through 5, 7 through 10, 12, 15, 16, 18, 19, 21 through 24, 26, 29 through 37, 39 and 42 through 44 under 35 U.S.C. §103(a) as allegedly being obvious over Ueta et al. in view of Goto. The Examiner has also rejected claims 13, 27, 40 and 45 through 47 under 35 U.S.C. §103(a) as allegedly being unpatentable over Ueta et al. and Goto in view of Kawamura et al.

In response to the arguments submitted in the Applicant's response of May 8 and October 7, 2008, the Examiner has maintained the same rejection bases in the Advisory Action mailed on October 22, 2008. In maintaining the rejections, the Examiner has stated that "Ueta teaches selecting via switch 79 in fig. 3 that selects either a coefficient, $K=0$, from fig. 3:80 or another coefficient, K not equal to zero, from fig. 3:81 as discussed in col. 5, lines 5-28." In this regard, the Applicant respectfully disagrees with the Examiner's characterization of the Ueta reference with respect to the "processing mode." On the other hand, the Examiner has suggested on page 2 of the Advisory Action that the user input can be explicitly recited and provided acceptable language.

Accordingly, the Applicant has amended independent claims to incorporate the Examiner's explicit suggestion to recite "as done by a user" to clarify the subject matter that the Applicant has been arguing in the past responses.

The Ueta reference does not teach, disclose or suggest the “processing mode” that is inputted “as done by a user.” In this regard, currently amended independent claims 1 and 29 both explicitly recite “inputting a user input value as done by a user including inputting a processing mode as done by a user.” Similarly, previously amended independent claim 15 explicitly recites “an operation unit for inputting a user input value as done by a user including inputting a processing mode as done by a user.” In other words, the current invention as explicitly recited in newly amended independent claims 1, 15 and 29 calls for “a user” to input the “processing mode” and the “user input value.” Furthermore, the current invention selects the “a correction coefficient” according to “a combination of the “threshold values,” the “outline characteristics” and the “user input value(s).” Among other things, the support for the above claim amendments is found in the original disclosure at lines 13 through 15 on page 7 of the current application.

In view of the above clarified subject matter limitations, the Ueta et al. reference fails to disclose, teach or suggest “inputting a processing mode as done by a user.” Prior to selecting a certain correction coefficient value, the system of the Ueta et al. reference allows the user to input a user-selected comparison coefficient value T_0 and a user-selected contrast coefficient K . (lines 44 through 48, column 3). Initially, the values a , b , and d from the three consecutive CCDs are calculated to generate $P=2b-(a+c)$, and the absolute value of P is compared to the user-selected comparison coefficient value T_0 . If $P < |T_0|$, then no edge contrast is performed. On the other hand, If $P =$ or $> |T_0|$, then edge contrast is performed. In both cases, there is no disclosure or suggestion on the user input other than a single value of the “ T_0 ” and “ K ,” which a user can input. The Examiner has alleged that K can take place a zero value or a non-zero value for disclosing “a set of predetermined correction coefficients.” But the user puts only a single value, which is the user inputted value. The zero value is set to avoid the use of the user determined single value. On the other hand, neither of them remotely suggests “a set of predetermined correction coefficients” as explicitly recited by the newly amended independent claims.

In addition, it appears that the Examiner has not responded to additional arguments that the Applicant has made in the same response of May 8, 2008 to overcome the section 103 rejections as allegedly being obvious over Ueta et al. in view of Goto. The Applicant had argued that the Goto reference discloses a user input method of choosing threshold values to optimize a display of a certain tissue structure of interest such as brain in an image generated by an apparatus such as an X-ray CT scanner.

In fact, the pending independent claims explicitly require that the threshold values are automatically generated based upon the input image rather than manually inputted by the user through human intervention. In this regard, independent claims 1 and 29 now both explicitly recite “generating a set of threshold values based upon an intensity level of the inputted image data.” Similarly, pending independent claim 15 explicitly recites “a threshold unit connected to said image data input unit for generating a set of threshold values based upon an intensity level of the inputted image data.”

In the previous Office Action, the Examiner has cited the Ueta reference for rejecting the above quoted subject matter limitations involving the “threshold unit” of independent claim 15. Although the Examiner has averred that lines 19, 21, 23 and 24 in column 8 of the Ueta reference discloses the above subject matter limitations, the Examiner had already conceded in the Office Action of February 20, 2008 that the Ueta reference fails to disclose that the above threshold determination is based upon the inputted image data. In the previous Office Action of August 22, 2008, the Examiner also clearly conceded in great detail on page 5 that “Ueta blindly or arbitrarily determines threshold values regardless of the current image that is going to be inputted in anticipation that the current image with [sic] have at least small or large contrast areas which are thresholded by predetermined threshold values in order to adjust the contrast edges on image.” Then, the Examiner cites the Gotho reference at lines 25 through 32 in column 3 for allegedly determining threshold in real time while displaying a corresponding image.

The Applicant had argued that the Goto reference discloses a user input method of choosing threshold values to optimize a display of a certain tissue structure of interest such as brain in an image generated by an apparatus such as an X-ray CT scanner. Among other things, as disclosed at lines 24 through 32 in column 3, the Goto reference requires an operator to adjust the threshold values as he or she is actually observing a portion of the image. In the technique of the Goto reference, no threshold is finalized without a user input or a human intervention. As already argued above, the pending independent claims explicitly require that the threshold values are automatically generated based upon the input image without manually inputted data by the user through human intervention.

Neither the Ueta et al. reference nor the Goto reference discloses, teaches or suggests the patentable features of the newly amended independent claims.

For these reason, even if the cited references are combined, the combined disclosures still fail to disclose, teach or suggest the above discussed patentable features of the current invention as explicitly recited in previously amended independent claims 1, 15 and 29. Thus, it would not have been obvious to one of ordinary in the art to provide the above discussed patentable feature of the current invention as explicitly recited in the newly amended independent claims based upon the cited prior art.

Lastly, the Examiner has also rejected claims 13, 27, 40 and 45 through 47 under 35 U.S.C. §103(a) as allegedly being unpatentable over Ueta et al. and Goto in view of Kawamura et al. The Examiner has indicated with respect to FIGURE 1 that the Kawamura et al. reference discloses the spatial arrangements of the edges. The Kawamura et al. reference also fails to disclose, teach or suggest the user input of "a processing mode" as explicitly recited by the newly amended independent claims.

In view of the above, dependent claims are also patentably distinct. Dependent claims 2 through 5, 7 through 10, 12, 13, 16 through 19, 21 through 24, 26, 27, 30 through 37, 39, 40 and

42 through 47 ultimately depend from one of currently amended independent claims 1, 15 and 29 and incorporate the patentable features of the independent claims. Thus, it would not have been obvious to one of ordinary skill in the art to provide the patentable features of the independent claims based upon the cited references alone or in combination. Therefore, the Applicant respectfully submit to the Examiner that the rejection of claims 1 through 5, 7 through 13, 15 through 19, 21 through 27, 29 through 40 and 42 through 44 under 35 U.S.C. §103(a) should be withdrawn.

Conclusion

In view of the above amendments and the foregoing remarks, Applicant respectfully submits that all of the pending claims are in condition for allowance and respectfully request a favorable Office Action so indicating.

Respectfully submitted,

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